

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (Amended) An acetabular prosthesis for cement implantation comprising:
 - a) a prosthesis full or partial cup body having a cup body wall with a cup body wall thickness, the body having a concave surface on a distal side of the cup body, a convex surface on a [promimal] proximal side of the cup body and an annular rim;
 - b) a superior flange extending in a superior direction from adjacent the annular rim, a posterior flange extending in a posterior direction from adjacent the annular rim, and an inferior flange extending in an inferior direction from adjacent the annular rim, each of said superior flange, posterior flange and inferior flange including at least two bone screw receptive openings;
 - [b]c) a liner that registers with the cup body, the liner having a liner wall with a liner wall thickness much greater than the cup body wall thickness and a concave surface and a convex surface that registers within the concave surface of the cup body;
 - [c]d) the cup body wall having a plurality of openings therethrough;
 - [d]e) some of the cup body wall openings being bone screw receptive openings that are reinforced with an annular reinforcement positioned on the [distal] proximal side of the cup body;
 - [e]f) a cement mantle for affixing the plastic liner to the cup body;
 - [f) the cup body having a peripheral buttress portion for supporting a portion next to the annular rim and extending distally downwardly from the concave surface, of

cement of the cement mantle at a peripheral interface position in between the liner and body;]

g) a concave surface of the wall extending distally to a greater extent adjacent the superior and posterior flanges than at other positions around the rim of the cup;

[g]h) wherein the cement mantle flows through at least some of the openings upon assembly of the cup liner to the cup body.

Kindly cancel claim 2 without prejudice.

Kindly cancel claim 9 without prejudice.

10. (Amended) The prosthesis of claim 1 wherein the [buttress] distally extending concave surface extends at least 45 degrees [about the periphery of] around the rim of the cup body.

11. (Amended) The prosthesis of claim 1 wherein the [buttress] distally extending concave surface extends at least 90 degrees [about the periphery of] around the rim of the cup body.

12. Amended) The prosthesis of claim 1 further comprising an annular reinforcement that surrounds [each] at least some of the cup body openings.

13. (Amended) An acetabular prosthesis for cement implantation comprising;
- a) a thin prosthesis cup body having a wall with a thickness of between 1 and 3 mm, the body having a distal concave surface area, a central portion, a proximal convex surface, and an annular rim defining a cup periphery;
 - b) [the cup body having at least a pair of flanges that extend away from the cup central portion]the cup body having a superior flange extending in a superior direction from adjacent the annular rim, a posterior flange extending in a posterior direction from adjacent the annular rim, and an inferior flange extending in an inferior direction from adjacent the annular rim, each of said superior flange, posterior flange and inferior flange including at least two bone screw receptive openings;
 - c) a plastic liner that can be cemented to the concave surface area of the cup body, the liner having a wall with a thickness much greater than the thickness of the cup body and a concave surface and a convex surface that registers with the concave surface area of the cup body;
 - d) the cup body wall having a plurality of openings therethrough;
 - e) some of the cup body wall openings being bone screw receptive openings that are reinforced with an annular reinforcement that extends away from the convex surface of the cup body;
 - f) a cement mantle for affixing the plastic liner to the cup body;
 - g) [the cup body having a peripheral buttress extending downwardly from the distal side of the cup body for supporting a portion of cement of the cement mantle at a peripheral interface position between the liner and body] a concave surface of the wall

extending distally to a greater extent adjacent the superior and posterior flanges than at other portions around the rim of the cup; and

h) wherein the cement mantle flows through at least some of the openings upon assembly of the cup liner to the cup body.

35. (Amended) An acetabular cup prosthesis comprising:

a) a cup member having a distal side with an inner concave surface and a proximal side with an outer convex surface;

b) the cup member having an apex and a rim that extends about the periphery of the cup member, the rim having a portion that defines a rim plane;

c) [a plurality of circumferentially spaced, radially extending flange portions that each extend a partial distance around the cup member and away from the cup rim] a superior flange extending in a superior direction from adjacent the rim, a posterior flange extending in a posterior direction from adjacent the rim, and an inferior flange extending in an inferior direction from adjacent the rim, each of said superior flange, posterior flange and inferior flange including at least two bone screw receptive openings; and

d) [a buttress mounted on the distal surface of the cup member, and that extends downwardly from the rim plane] the inner concave surface extending distally from the rim plane to a greater extent adjacent the superior and posterior flanges than at other positions around the rim of the cup.

36. (Amended) The acetabular cup prosthesis of claim 35 wherein the [buttress] distally extending concave surface is curved to follow the rim.

37. (Amended) The acetabular cup prosthesis of claim 35 wherein the [buttress] distally extending concave surface extends about 105-115 degrees about the cup member along a curved path.

38. (Amended) The acetabular cup prosthesis of claim 35 wherein [each flange] the superior flange, the posterior flange and the inferior flange each extend[s] around the cup member a measure of between about 20 and 45 degrees.

Kindly cancel claims 39 and 40 without prejudice.

41. (Amended) The acetabular cup prosthesis of claim 36 wherein at least [some of the flanges form] one of the flanges forms an acute angle with the rim plane.

42. (Amended) The acetabular cup prosthesis of claim 36 wherein at least [some of the flanges form] one of the flanges forms an angle with the rim plane of between about 15 and 45 degrees.

Kindly cancel claims 43 – 46 without prejudice.

47. (Amended) An acetabular prosthesis, comprising:

(a) a cup member having (i) an inner, distal cup member concave surface adapted to receive a liner, (ii) [a containing portion formed on the inner, distal concave surface that extends at least partially circumferentially around the cup member] a secondary concave surface extending distally from the cup member, (iii) an outer, proximal convex surface, and (iv) a plurality of openings;

(b) [at least one fixation member extending from the cup member and adapted to affix the cup member to a patient's bone in use]a superior flange extending in a superior direction from the cup member, a posterior flange extending in a posterior direction from the cup member, and an inferior flange extending in an inferior direction from the cup member, each of said superior flange, posterior flange and inferior flange including at least two bone screw receptive openings,

[wherein the at least one fixation member extends from the outer, proximal convex surface of the cup member such that the containing portion defines at least a slight ridge between the inner surface and the at least one fixation member, the containing portion] wherein the secondary concave surface extends to a greater extent adjacent the superior and posterior flanges than at other positions around the cup member, wherein the superior flange, posterior flange and inferior flange extend from the outer, proximal convex surface of the cup member, and wherein the secondary concave surface is adapted to at least partially contain flow of securing material.

Kindly cancel claim 48 without prejudice.

49. (Amended) The acetabular prosthesis of claim 47, wherein [the at least one fixation member] at least one of the flanges is angled relative to the cup member.

Kindly cancel claim 50 without prejudice.

51. (Amended) The acetabular prosthesis of claim 47, wherein [the at least one fixation member] at least one of the flanges is integral with the cup member.

Kindly cancel claim 52 without prejudice.

53. (Amended) The acetabular prosthesis of claim 47, wherein [the at least one fixation member] at least one of the flanges extends from the cup member in a direction angled relative to [the] a diameter of the prosthesis.

Kindly cancel claims 54 and 55 without prejudice.

56. (Amended) An acetabular prosthesis, comprising:
(a) an at least partially cup-shaped device having an inner concave surface for [(i)] receiving a liner adapted to be cemented within the [device and (ii)] device; (b) the device having a [securing member defining a lip between the inner concave surface of the device and at least one fixation member, the lip extending at least partially

circumferentially around the device to help secure cement between the cup-shaped device and a liner] distally extending concave surface extending distally from the at least partially cup-shaped device; [and]

[(b)](c) [at least one fixation member extending from the device proximal to the lip, adapted for fixation of the device in a patient's acetabular region.] a superior flange extending in a superior direction from the at least partially cup-shaped device, a posterior flange extending in a posterior direction from the at least partially cup-shaped device, and an inferior flange extending in an inferior direction from the at least partially cup-shaped device, each of said superior flange, posterior flange and inferior flange including at least two bone screw receptive openings, wherein the flanges are adapted for fixation of the at least partially cup-shaped device in a patient's acetabular region, wherein the concave surface extends distally to a greater extent adjacent the superior and posterior flanges than at other portions around the at least partially cup-shaped device.

57. (Amended) The acetabular prosthesis of claim 56 wherein the at least partially cup-shaped device has a plurality of openings for use as bone screw receptive openings or for allowing cement to flow through the device.

Kindly cancel Claim 58 without prejudice.

59. (Amended) The acetabular prosthesis of claim 56, wherein [the at least one fixation member] at least one of the flanges is angled relative to the at least partially cup-shaped device.

Kindly cancel claim 60 without prejudice.

61. (Amended) The acetabular prosthesis of claim 56, wherein [the at least one fixation member] at least one of the flanges is integral with the at least partially cup-shaped device.

Kindly cancel claim 62.

63. (Amended) The acetabular prosthesis of claim 56, wherein [the at least one fixation member] at least one of the flanges extends from the cup member in a direction angled relative to [the] a diameter of the [prosthesis] at least partially cup-shaped device.

Kindly cancel claims 64 and 65.

66. (Amended) An acetabular prosthesis, comprising:

- (a) a cup body for receiving a liner adapted to be cemented within the cup body;
and
- (b) [the cup body having at least two fixation members extending from the cup body for fixation of the cup body to a patient's acetabular region, the fixation

members having a plurality of openings] a superior flange extending in a superior direction from the cup body, a posterior flange extending in a posterior direction from the cup body, and an inferior flange extending in an inferior direction from the cup body, each of said superior flange, posterior flange and inferior flange including at least two bone screw receptive openings;

[(c)]wherein the cup body further defines [defining a securing member surface forming at least a slight ridge where the fixation members extend from the cup body, the securing member surface extending at least partially circumferentially around the cup body] a concave surface extending distally to a greater extent adjacent the superior and posterior flanges than at other positions around a rim of the cup body and in use adapted for at least one of: at least partially containing cement in place, at least partially securing a liner in position, at least partially maintaining cement in contact with the liner at the securing member surface, at least partially preventing the cement from traversing from the cup body to the fixation members, and any combination thereof.

67. (Amended) An acetabular prosthesis comprising:

(a) a cup [having fixation members each of which intersect the cup at an intersection region], the cup having a superior flange extending in a superior direction from the cup, a posterior flange extending in a posterior direction from the cup, and an inferior flange extending in an inferior direction from the cup, each of said

superior flange, posterior flange and inferior flange including at least two bone screw receptive openings;

- (b) a liner received within the cup; and
- (c) a cement mantle securing the liner to the cup;

wherein the cup comprises [a support lip that extends at least partially circumferentially beyond the intersection region and at least partially distal to the intersection region, precluding a smooth transition surface between the cup and the fixation members] a concave surface extending distally to a greater extent adjacent the superior and posterior flanges than at other positions around the cup such that the [support lip] concave surface supports and maintains at least one of the cement mantle and the liner in place.

68. (Amended) The acetabular prosthesis of claim 67, wherein the cup has a plurality of cup openings for use as bone screw receptive openings or for allowing cement to flow through the cup.

69. (Amended) The acetabular prosthesis of claim 67, wherein [the fixation members] at least one of the flanges are angled relative to the cup.

Kindly cancel claim 70 without prejudice.

71. (Amended) The acetabular prosthesis of claim 67, wherein [the fixation members are] at least one of the flanges is integral with the cup.

Kindly cancel claim 72 without prejudice.

73. (Amended) The acetabular prosthesis of claim 67, wherein [the fixation members] at least one of the flanges radially or non-radially extends from the cup [body].

74. (Amended) The acetabular prosthesis of claim 67, wherein [the fixation members extend] at least one of the flanges extends from the cup [member] in a direction angled relative to the diameter of the prosthesis.

Kindly cancel claim 75 without prejudice.

76. (Amended) [A acetabular] An acetabular cup prosthesis for cement implantation, comprising:

- (a) a cup member having a distal side with an inner concave surface and a proximal side with an outer convex surface;
- (b) [the cup member having an edge that extends about a periphery of the cup member]a superior flange extending in a superior direction from the cup member, a posterior flange extending in a posterior direction from adjacent the cup member, and an inferior flange extending in an inferior direction from the cup member, each of

said superior flange, posterior flange and inferior flange including at least two bone screw receptive openings;

(c) [a plurality of extending attachment members each of which extends a partial distance around the cup member and away from the edge] the inner concave surface extending distally from the cup member to a greater extent adjacent the superior and posterior flanges than at other positions around the cup member;

[(d) a portion of the edge being defined in part by the cup member and in part by the extending attachment members, wherein the edge inhibits a smooth transition surface between the cup member and the extending attachment members] and in use adapted to capture at least a portion of cement used within the cup member[, the edge extending at least slightly distally from the extending flange portions].